

THE attention of a considerable section of the scientific world is just now, no doubt, being concentrated along the line of investigation suggested by the remarkable paper read last autumn before the Royal Society, by Mr. Norman Lockyer. This paper, modest though it was in form, and in its title "Preliminary Notes on the Spectra of Meteorites," contained in reality nothing less than a new theory of the structure of the universe. By a series of observations and experiments this eminent astronomer has reached the conclusion that meteorites are the raw material out of which the heavenly bodies have been evolved, and by means of which the self-luminous ones are constantly fed. It has long been accepted in scientific circles as demonstrated that space swarms with meteorites of various sizes and varying temperature. It is computed that no less than twenty millions of these meteorites enter the earth's atmosphere every year, and hence it is inferred that the number of those moving in outlying space is practically infinite. Taking as his point of departure the fact, or assumption, that the meteoric stone is the only material link accessible between this planet and the outer regions of the cosmos, Mr. Lockyer was led to subject these stones to a series of careful experiments, by spectrum analysis in the laboratory, reaching as a result the conclusion above indicated. He claims to have found a correspondence between the spectrum of the meteorite thus obtained and that of particular stars, inasmuch that it was possible to obtain "an approximate reproduction of the solar spectrum by successively volatilizing several stony meteorites of varied composition in an electric arc produced between iron meteoric poles, and taking a composite photograph of the resulting spectra." Following along this line he reached the conclusions which he stated in what has been called a theory of "The Origin of Celestial Species." Some of the leading features of this theory are that "all self-luminous bodies in the celestial spaces are composed of meteorites, or masses of meteoric vapour, produced by heat brought about by condensations of meteor swarms due to gravity"; that nebulae are sparse clusters of associated meteorites; that comets are nebulae whose proper motions have brought them within the range of the sun's attraction, and so on. As we have intimated the theory is now being, in all probability, subjected to the test of scientific criticism by other observers, by whom it will eventually be either discarded or adopted for a season, probably to be displaced in its turn, the agnostic of astronomic science would suggest, by some other equally plausible and equally evanescent theory of the cosmos.

THE question of international copyright is just now to the fore in English and American magazines. The discussion was started by an article in the November number of the *Nineteenth Century*, by Mr. R. Pearsall Smith, reviving and advocating a plan first proposed by Sir Charles Trevelyan in 1872. The main features of the proposal, as given by Mr. Pearsall Smith himself, are as follows: "The foreign author must supply receipt stamps, representing 10 per cent. on the retail price royalty to any publisher, within thirty days after their price is tendered; every book sold must contain this author's receipt stamp bearing a facsimile of his signature. The author must deliver stamps on the conditions mentioned under penalty of losing his copyright moneys; the bookseller forfeits ten times the retail price of every copy sold by him without the stamp, the prosecutor to have one-half, the Government the other half of this fine, in addition to liability to the author for general damages." Accompanying the article were the comments of a dozen distinguished Englishmen, nearly all of whom gave an approval, more or less modified. This they seem to have done, however, on the assumption that complete copyright for foreign authors is at present, and in the immediate future, unattainable in the United States, thus acting on the principle distinctly stated by Mr. Hallam Tennyson, speaking for his father, that "something is better than nothing." Acting on a suggestion from Mr. Gladstone that the discussion be followed up on this side the Atlantic, Mr. Allen Thorndyke Rice, the editor of the *North American Review*, gives in the current number of that magazine a further article by Mr. Pearsall Smith, containing his most matured views, and accompanied by short expressions of opinion from fourteen prominent Americans, to whom the article was submitted. Nearly all these expressions are distinctly, and several of them severely, hostile to the royalty and stamp plan. Exception is taken on both practical and moral grounds. The practical objections are summed up by the editor of the *Popular Science Monthly*, in his January number, as opportunities for fraud, possible difficulties in recovering the value of unused stamps, and the general influence on the trade of the uncertainties of open competition. Animus is no doubt imparted to the objections of American authors and publishers by the prospect opened up by the scheme of still more damaging competition by cheap additions of foreign authors, with prospective loss of American copyright. As Edward Eggleston puts it: "Its adoption would immediately open the door for any hobby-rider or demagogue to advocate the cheapening of

books by the abolition of the present system of American domestic copyright, on which almost the very existence of our literature depends." By no one have the moral objections to the stamp plan been more trenchantly exposed than by Professor Huxley, who points out that it would admit that a book is the property of its author, and so far show that the consciences of American readers had been reached, and adds, "All they ask (and they seem to think the request a grace) is that they themselves shall be the assessors of the pecuniary value of their obligations." This remark touches the core of the moral principle involved. It may be added, that while the American Copyright League strenuously opposes the scheme and deprecates its discussion, it is asserted on behalf of the members of the League that those of them "who are not optimists believe that the present union of purpose between authors and publishers almost insures the adoption of an international copyright measure in the present Congress."

WASHINGTON LETTER.

THE IMPROVED STATE OF THE FISHERY QUESTION.

ON the eve of resumption of the Fishery negotiations at Washington, a brief retrospect of the situation may not be out of place, in aid of an intelligent forecast of the final result.

In democratic societies, foreign relations are always much affected by the course of domestic politics; an axiom that has had many illustrations in the diplomatic history of this country, wherein, from the very first, a veto upon the treaty-making power of the Executive has been lodged in one of the legislative chambers. Two years ago, the weakness of President Cleveland's Administration prevented him from carrying out his conditional promise to settle the Fishery question by means of a joint commission. When the Imperial Government lately took the initiative by forming a commission of negotiators, in which the Home and Canadian Governments could each have representation, it must have been less in reliance upon the ability of the President to give effect to his sentiments of good neighbourhood, than upon the conviction that matters could not be made worse by such action, while the tension was sure to be somewhat relieved, and there was, at least, a chance of a joint diplomatic commission reaching a conclusion so fair and moderate as to commend itself to the sober second thought of the two peoples immediately interested. Had Lord Salisbury's hopes gone much beyond what has been herein indicated, he would not have selected Mr. Chamberlain for the post of chief negotiator, despite his eminent personal fitness for the place, since such an appointment took small note of the conditions of American internal politics. Hence, the criticisms made in this correspondence upon the choice of Mr. Chamberlain, at the time it was announced, were perfectly sound and legitimate, having regard to their standpoint.

Lord Salisbury's recent luck in foreign affairs has attended his venture over here. Only two months ago, the sweeping victory of the Administration party in the pivotal State of New York brought all recalcitrant Democrats to the feet of the President, and secured, in advance, for any proposals of the Fishery Commission, the support of at least half, and probably more than half, of the electorate; a result duly noted at the time by your correspondent. Still, there was a hostile majority in the Senate, and a hostile Presidential candidate, in full control of the machinery of the Republican party, with an extraordinary influence over the Irish vote, without regard to party names and affiliations. This influence has since, happily and remarkably, disappeared. Nobody has so much reason now to wish the nomination of Mr. Blaine, in opposition to himself, as President Cleveland. This transformation in the political situation has been effected by the tariff message of the President, supplemented by the characteristically rash comments thereon of Mr. Blaine. The Irish vote may go where it pleases, now, without harming the Democrats; but the strong probability is that it will remain with them. So disadvantageous to Republican prospects has been the influence of the tariff message, that many leaders of that party are willing to help the Administration pass a moderate but substantial bill in reduction of import duties, merely to get the embarrassing question out of the way before the Presidential campaign comes on next autumn. That, however, cannot benefit them, for the Democrats will get the prestige of whatsoever measure of tariff reduction shall be passed, and there is no other issue open to the Republicans of fairer promise than that of which they have, suddenly, become so afraid.

The bearing of these changes in our internal politics upon the Fishery negotiation is easily to be seen. The President is now, to all appearances, the political arbiter of the Union. The Senate will not dare to reject or materially alter any Fishery Treaty having the stamp of his approval; it is not certain that there will be, when the time comes, a partisan majority willing to reject it if they dared. The joint labours of Messrs. Bayard